



SEQUENCE LISTING

<110> Hall, Roderick L
Poll, Christopher T.
Newton, Benjamin B.
Taylor, William J.A.

<120> A Method for Accelerating the Rate of Mucociliary Clearance

<130> 98,736-A

<140>

<141>

<150> 09/218,913

<151> 1998-12-22

<160> 71

<170> Microsoft Word 97

<210> 1

<211> 179

<212> PRT

<213> Homo sapien

<400> 1

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Ala Val Ser

<210> 2
<211> 197
<212> PRT
<213> Homo sapien

<220>
<221> sig_peptide
<222> 1..18

<400> 2
Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Leu Ser Gly Val
1 5 10 15
Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30
Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45
Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
50 55 60
Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
65 70 75 80
Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
85 90 95
Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp
100 105 110
His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala
115 120 125
Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val
130 135 140
Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn
145 150 155 160
Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg
165 170 175
Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu
180 185 190
Ala Gly Ala Val Ser
195

<210> 3
<211> 153
<212> PRT
<213> Homo sapien

<400> 3
Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala
1 5 10 15

Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu
 20 25 30
 Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys
 35 40 45
 Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly
 50 55 60
 Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala
 65 70 75 80
 Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr
 85 90 95
 Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser
 100 105 110
 Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe
 115 120 125
 Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu
 130 135 140
 Ala Cys Met Leu Arg Cys Phe Arg Gln
 145 150

<210> 4
 <211> 58
 <212> PRT
 <213> Homo sapien

<400> 4
 Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala
 1 5 10 15

Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu
 20 25 30

Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys
 35 40 45

Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55

<210> 5
 <211> 51
 <212> PRT
 <213> Homo sapien

<400> 5
 Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg
 1 5 10 15

Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly
 20 25 30

Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu
 35 40 45

Lys Lys Cys
50

<210> 6
<211> 58
<212> PRT
<213> Homo sapien

<400> 6
Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
1 5 10 15
Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
20 25 30
Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
35 40 45
Glu Ala Cys Met Leu Arg Cys Phe Arg Gln
50 55

<210> 7
<211> 51
<212> PRT
<213> Homo sapien

<400> 7
Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg
1 5 10 15
Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly
20 25 30
Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met
35 40 45
Leu Arg Cys
50

<210> 8
<211> 92
<212> PRT
<213> Homo sapien

<400> 8
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15
Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30
Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45
Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60
Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser
85 90

<210> 9
<211> 708
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> 679..708
<223> /note= "n at positions 622, 679, 707 is any nucleic acid"

<400> 9
ggccgggtcg tttctgcct ggctgggac gctgctctc tctgggtcc tggcggccga 60
ccgagaacgc agcatccacg acttctgcct ggtgtcgaag gtgggtggca gatgccgggc 120
ctccatgcct aggtgggtgt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg 180
gggctgtgac ggaacagca ataattacct gaccaaggag gagtgcctca agaaatgtgc 240
cactgtcaca gagaatgcca cgggtgacct ggccaccagc aggaatgcag cggattcctc 300
tgtcccaagt gctcccagaa ggcaggattc tgaagaccac tccagcgata tgttcaacta 360
tgaagaatac tgcaccgcca acgcagtcac tgggccttgc cgtgcatcct tcccacgctg 420
gtactttgac gtggagagga actcctgcaa taacttcac tatggaggct gccggggcaa 480
taagaacagc taccgctctg aggaggcctg catgctccgc tgcttccgcc agcaggagaa 540
tcctcccctg ccccttggtc caaagggtgt ggttctggcc ggggctgtt cgtgatggtg 600
ttgatccttt tcctggggag cntccatggt cttactgatt ccgggtggca aggaggaacc 660
aggagcgtgc cctgcggnac gtctggagct tcggagatga caagggnt 708

<210> 10
<211> 235
<212> PRT
<213> Homo sapien

<220>
<221> peptide
<222> 1..235
<223> /note= "Xaa at positions 201, 226, and 233 are nonsense or stop codons"

<400> 10
Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Leu Ser Gly Val
1 5 10 15
Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30
Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45
Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly

50 55 60
 Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
 65 70 75 80
 Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
 85 90 95
 Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp
 100 105 110
 His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala
 115 120 125
 Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val
 130 135 140
 Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn
 145 150 155 160
 Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg
 165 170 175
 Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu
 180 185 190
 Ala Gly Ala Val Ser Xaa Trp Cys Xaa Ser Phe Ser Trp Gly Ala Ser
 195 200 205
 Met Val Leu Leu Ile Pro Gly Gly Lys Glu Glu Pro Gly Ala Cys Pro
 210 215 220
 Ala Xaa Arg Leu Glu Leu Arg Arg Xaa Gln Gly
 225 230 235

 <210> 11
 <211> 170
 <212> PRT
 <213> Homo sapien

 <220>
 <221> peptide
 <222> 1..170
 <223> /note= "Xaa at positions 8, 17, 21-26, 40, 42, 45-47, 52, 64,
 103, 112, 114, 116-121, 135, 137, 140-142, 147, and 159 is any
 amino acid residue"

 <400> 11
 Ala Asp Arg Glu Arg Ser Ile Xaa Asp Phe Cys Leu Val Ser Lys Val
 1 5 10 15
 Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp Trp Tyr Asn Val Thr
 20 25 30
 Asp Gly Ser Cys Gln Leu Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Ser
 35 40 45
 Asn Asn Tyr Xaa Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Xaa
 50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80
 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95
 Ser Asp Met Phe Asn Tyr Xaa Glu Tyr Cys Thr Ala Asn Ala Val Xaa
 100 105 110
 Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp Tyr Phe Asp Val Glu Arg
 115 120 125
 Asn Ser Cys Asn Asn Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Lys Asn
 130 135 140
 Ser Tyr Xaa Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Xaa Gln
 145 150 155 160
 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
 165 170 175

Ala Val Ser

<210> 12
 <211> 393
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> 390..391
 <223> /note= "residue 361 is any nucleic acid"

<220>
 <221> misc_feature
 <222> 390..391
 <223> /note= "residue 367 is any nucleic acid"

<220>
 <221> misc_feature
 <222> 384..385
 <223> /note= "residue 384 is any nucleic acid"

<220>
 <221> misc_feature
 <222> 367..368
 <223> /note= "residue 390 is any nucleic acid"

<400> 12
 ggccgggtcg tttctgcct ggctgggatc gctgctctc tctggggtcc tggccggccg 60
 accgagaacg cagcatccac gacttctgcc tgggtgtcgaa ggtgggtggc agattccggg 120
 cctccatgcc taggtggtgg tacaatgtca ctgacggatc ctgccagctg tttgtgtatg 180
 ggggctgtga cggaacagc aataattacc tgaccaagga ggagtgcctc aagaaatgtg 240
 ccaactgtcac agagaatgcc acgggtgacc tggccaccag caggaatgca gcggattcct 300
 ctgtcccaag tgctcccaga aggcaggatt cttgaagacc acttcagcga tatgtttcaa 360

ntattgnaag aataattgca ccgncacgn att

393

<210> 13

<211> 130

<212> PRT

<213> Homo sapien

<220>

<221> Region

<222> 1..18

<223> /label= signal peptide

<220>

<221> Peptide

<222> 111..130

<223> /note= "Xaa at positions 111, 120, 122, 128, and 130 represents a nonsense or stop codon"

<400> 13

Pro Gly Arg Phe Ser Pro Gly Trp Asp Arg Cys Ser Ser Leu Gly Ser
1 5 10 15

Trp Pro Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30

Lys Val Val Gly Arg Glu Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45

Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
50 55 60

Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
65 70 75 80

Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
85 90 95

Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Xaa Arg
100 105 110

Pro Leu Gln Arg Tyr Val Ser Xaa Ile Xaa Arg Ile Ile Ala Pro Xaa
115 120 125

Thr Xaa
130

<210> 14

<211> 511

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> 425..510

<223> /note= "n at positions 425, 482, and 510 is any nucleic acid"

<400> 14

gcaataatta cctgaccaag gaggagtgcc tcaagaaatg tgccactgtc acagagaatg 60

ccacgggtga cctggccacc agcaggaatg cagcggattc ctctgtccca agtgctccca 120
gaaggcagga ttctgaagac cactccagcg atatgttcaa ctatgaagaa tactgcaccg 180
ccaacgcagt cactgggcct tgccgtgcat ccttcccacg ctggtacttt gacgtggaga 240
ggaactcctg caataacttc atctatggag gctgccgggg caataagaac agctaccgct 300
ctgaggaggc ctgcatgctc cgctgcttcc gccagcagga gaatcctccc ctgccccttg 360
gctcaaaggt ggtggttctg gccggggctg tttcgtgatg gtgttgatcc ttttcctggg 420
gagcntccat ggtcttactg attccgggtg gcaaggagga accaggagcg tgccctgcgg 480
ancgtctgga gcttcggaga tgacaagggn t 511

<210> 15

<211> 169

<212> PRT

<213> Homo sapien

<220>

<221> peptide

<222> 1..169

<223> /note= "Xaa at positions 2, 23, 132, 160, and 167 represent a nonsense or stop codon"

<400> 15

Gln Xaa Leu Pro Asp Gln Gly Gly Val Pro Gln Glu Met Cys His Cys
1 5 10 15

His Arg Glu Cys His Gly Xaa Pro Gly His Gln Gln Glu Cys Ser Gly
20 25 30

Phe Leu Cys Pro Lys Ser Pro Arg Arg Gln Asp Ser Glu Asp His Ser
35 40 45

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
50 55 60

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
65 70 75 80

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
85 90 95

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
100 105 110

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
115 120 125

Ala Val Ser Xaa Trp Cys Xaa Ser Phe Ser Trp Gly Ala Ser Met Val
130 135 140

Leu Leu Ile Pro Gly Gly Lys Glu Glu Pro Gly Ala Cys Pro Ala Xaa
145 150 155 160

Arg Leu Glu Leu Arg Arg Xaa Gln Gly
165

<210> 16
 <211> 428
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> 1..430
 <223> /note= "n at positions 3, 11, 12, 17, 51 and 429 represent any nucleic acid"

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<400> 16
gcngcgcggt nntcgcntgc tgggatcgct gctgcacctc tctggggtcg nggcggccga      60
ccgagaacgc agcatccacg acttctgcct ggtgtcgaag gtggtgggca gatgccgggc      120
ctccatgcct aggtgggtgt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg      180
gggctgtgac ggaaacagca ataattacct gaccaaggag gagtgcctca agaaatgtgc      240
cactgtcaca gagaatgcca cgggtgacct ggccaccagc aggaatgcag cggattcctc      300
tgtcccaagt gctcccagaa ggcaggattc ttgaagacca cttcagcgat atgttcaact      360
atgaagaata ctggcaccgc caacgcattc actgggcctg cgtgcatcct tcccacgctg      420
gtactttgnc g                                                                431
  
```

<210> 17
 <211> 424
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> 1..424
 <223> /note= "n at positions 6, 310 and 408 represent any nucleic acid"

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<400> 17
tgggantcgc tgctcctctc tggggtcctg gcggccgacc gagaacgcag catccacgac      60
ttctgcctgg tgcgaagggt ggtgggcaga tgccgggcct ccatgcctag gtggtggtac      120
aatgtcactg acggatcctg ccagctgttt gtgtatgggg gctgtgacgg aaacagcaat      180
aattacctga ccaaggagga gtgcctcaag aaatgtgcca ctgtcacaga gaatgccacg      240
ggtgacctgg ccaccagcag gaatgcagcg gattcctctg tccaagtgc tcccagaagg      300
caggattctn gaagaccact ccagcgatat gttcaactat gaagaatact gcaccgccaa      360
cgcagtcact gggccttgcg tggaatcctt tcccacgctg gnaatttnga cgttgagaag      420
gaac                                                                424
  
```

<210> 18
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <221>
 <222>
 <223> /note= "Tissue factor pathway inhibitor precursor 1"

 <400> 18
 His Ser Phe Cys Ala Phe Lys Ala Asp Asp Gly Pro Cys Lys Ala Ile
 1 5 10 15
 Met Lys Arg Phe Phe Phe Asn Ile Phe Thr Arg Gln Cys Glu Glu Phe
 20 25 30
 Ile Tyr Gly Gly Cys Glu Gly Asn Gln Asn Arg Phe Glu Ser Leu Glu
 35 40 45
 Glu Cys Lys Lys Met Cys Thr Arg Asp
 50 55

 <210> 19
 <211> 57
 <212> PRT
 <213> Unknown

 <220>
 <223> /note= "Tissue factor pathway inhibitor precursor 1"

 <400> 19
 Pro Asp Phe Cys Phe Leu Glu Glu Asp Pro Gly Ile Cys Arg Gly Tyr
 1 5 10 15
 Ile Thr Arg Tyr Phe Tyr Asn Asn Gln Thr Lys Gln Cys Glu Arg Phe
 20 25 30
 Lys Tyr Gly Gly Cys Leu Gly Asn Met Asn Asn Phe Glu Thr Leu Glu
 35 40 45
 Glu Cys Lys Asn Ile Cys Glu Asp Gly
 50 55

 <210> 20
 <211> 57
 <212> PRT
 <213> Unknown

 <220>
 <223> /note= "Tissue factor pathway inhibitor precursor"

 <400> 20
 Pro Ser Trp Cys Leu Thr Pro Ala Asp Arg Gly Leu Cys Arg Ala Asn
 1 5 10 15
 Glu Asn Arg Phe Tyr Tyr Asn Ser Val Ile Gly Lys Cys Arg Pro Phe
 20 25 30
 Lys Tyr Ser Gly Cys Gly Gly Asn Glu Asn Asn Phe Thr Ser Lys Gln
 35 40 45
 Glu Cys Leu Arg Ala Cys Lys Lys Gly
 50 55

<210> 21
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "Tissue factor pathway inhibitor precursor 2"

<400> 21
 Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu
 1 5 10 15
 Leu Leu Arg Tyr Tyr Tyr Arg Tyr Arg Thr Gln Ser Cys Arg Gln Phe
 20 25 30
 Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu
 35 40 45
 Ala Cys Asp Asp Ala Cys Trp Arg Ile
 50 55

<210> 22
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "Tissue factor pathway inhibitor precursor 2"

<400> 22
 Pro Ser Phe Cys Tyr Ser Pro Lys Asp Glu Gly Leu Cys Ser Ala Asn
 1 5 10 15
 Val Thr Arg Tyr Tyr Phe Asn Pro Arg Tyr Arg Thr Cys Asp Ala Phe
 20 25 30
 Thr Tyr Thr Gly Cys Gly Asn Asn Asp Asn Asn Phe Val Ser Arg Glu
 35 40 45
 Asp Ser Lys Arg Ala Cys Ala Lys Ala
 50 55

<210> 23
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "Amyloid Precursor Protein homologue"

<400> 23
 Lys Ala Val Cys Ser Gln Glu Ala Met Thr Gly Pro Cys Arg Ala Val
 1 5 10 15
 Met Pro Arg Thr Thr Phe Asp Leu Ser Lys Gly Lys Cys Val Arg Phe
 20 25 30
 Ile Thr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Glu Ser Glu Asp
 35 40 45

Tyr Cys Met Ala Val Cys Lys Ala Met
50 55

<210> 24
<211> 58
<212> PRT
<213> Unknown

<220>
<223> /note= "Aprotinin"

<400> 24
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
1 5 10 15

Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 25
<211> 51
<212> PRT
<213> Unknown

<220>
<223> /note= "Inter alpha-trypsin inhibitor precursor"

<400> 25
Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys Met Gly Met Thr Ser Arg
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Ser Met Ala Cys Glu Thr Phe Gln Tyr Gly
20 25 30

Gly Cys Met Gly Asn Gly Asn Asn Phe Val Thr Glu Lys Glu Cys Leu
35 40 45

Gln Thr Cys
50

<210> 26
<211> 57
<212> PRT
<213> Unknown

<220>
<223> /note= "Inter alpha-trypsin inhibitor precursor"

<400> 26
Val Ala Ala Cys Asn Leu Pro Ile Val Arg Gly Pro Cys Arg Ala Phe
1 5 10 15

Ile Gln Leu Trp Ala Phe Asp Ala Val Lys Gly Lys Cys Val Leu Phe
20 25 30

Pro Tyr Gly Gly Cys Gln Gly Asn Gly Asn Lys Phe Tyr Ser Glu Lys
 35 40 45

Glu Cys Arg Glu Tyr Cys Gly Val Pro
 50 55

<210> 27
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "Amyloid precursor protein"

<400> 27
 Glu Val Cys Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met
 1 5 10 15

Ile Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe
 20 25 30

Phe Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu
 35 40 45

Tyr Cys Met Ala Val Cys Gly Ser Ala
 50 55

<210> 28
 <211> 51
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "Collagen alpha-3 (VI) precursor"

<400> 28
 Cys Lys Leu Pro Lys Asp Glu Gly Thr Cys Arg Asp Phe Ile Leu Lys
 1 5 10 15

Trp Tyr Tyr Asp Pro Asn Thr Lys Ser Cys Ala Arg Phe Trp Tyr Gly
 20 25 30

Gly Cys Gly Gly Asn Glu Asn Lys Phe Gly Ser Gln Lys Glu Cys Glu
 35 40 45

Lys Val Cys
 50

<210> 29
 <211> 57
 <212> PRT
 <213> Unknown

<220>
 <223> /note= "HKI-B9"

<400> 29
 Pro Asn Val Cys Ala Phe Pro Met Glu Lys Gly Pro Cys Gln Thr Tyr
 1 5 10 15

Met Thr Arg Trp Phe Phe Asn Phe Glu Thr Gly Glu Cys Glu Leu Phe
20 25 30
Ala Tyr Gly Gly Cys Gly Gly Asn Ser Asn Asn Phe Leu Arg Lys Glu
35 40 45
Lys Cys Glu Lys Phe Cys Lys Phe Thr
50 55

<210> 30
<211> 46
<212> DNA
<213> S. cerevisiae

<400> 30
gccaaagcttg gataaaagat atgaagaata ctgcaccgcc aacgca 46

<210> 31
<211> 35
<212> DNA
<213> S. cerevisiae

<400> 31
ggggatcctc actgctggcg gaagcagcgg agcat 35

<210> 32
<211> 206
<212> DNA
<213> Homo sapien

<220>
<223> /note= "cDNA of human Bikunin protein fragment"

<400> 32
ccaagcttgg ataaaagata tgaagaatac tgcaccgcc aacgagtcac tgggccttgc 60
cgtgcatect tcccacgctg gtactttgac gtggagagga actcctgcaa taacttcac 120
tatggaggct gccggggcaa taagaacagc taccgctctg aggaggcctg catgctccgc 180
tgcttccgcc agcagtgagg atcccc 206

<210> 33
<211> 28
<212> DNA
<213> Homo sapien

<400> 33
cgaagcttca tctccgaagc tccagacg 28

<210> 34
<211> 31
<212> DNA
<213> Homo sapien

<400> 34
aggatctaga caataattac ctgaccaagg a 31

<210> 35

<211> 36
 <212> DNA
 <213> Homo sapien

<400> 35
 ggtctagagg ccgggtcggt tctcgctgg ctggga 37

<210> 36
 <211> 19
 <212> DNA
 <213> Homo sapien

<400> 36
 cacctgatcg cgagacccc 19

<210> 37
 <211> 19
 <212> DNA
 <213> Homo sapien

<400> 37
 gatttaggtg acactatag 19

<210> 38
 <211> 20
 <212> DNA
 <213> Homo sapien

<400> 38
 taatacgact cactataggg 20

<210> 39
 <211> 22
 <212> DNA
 <213> Homo sapien

<400> 39
 ttacctgacc aaggaggagt gc 22

<210> 40
 <211> 23
 <212> DNA
 <213> Homo sapien

<400> 40
 aatccgctgc attcctgctg gtg 23

<210> 41
 <211> 20
 <212> DNA
 <213> Homo sapien

<400> 41
 cagtcactgg gccttgccgt 20

<210> 42
 <211> 105
 <212> DNA
 <213> Homo sapien

<400> 42
 gaaggggtaa gcttggataa aagatatgaa gaatactgca ccgccaacgc agtcactggg 60
 ccttgccgtg catccttccc acgctggtac tttgacgtgg agagg 105
 <210> 43
 <211> 129
 <212> DNA
 <213> Homo sapien
 <400> 43
 cgcggatccc tactggcgga agcagcggag catgcaggcc tcctcagagc ggtagctggt 60
 cttattgccc cggcagcctc catagatgaa gttattgcag gagttcctct ccacgtcaaa 120
 gtaccagcg 129
 <210> 44
 <211> 207
 <212> DNA
 <213> Homo sapien
 <400> 44
 gaaggggtaa gcttggataa aagatatgaa gaatactgca ccgccaacgc agtcactggg 60
 ccttgccgtg catccttccc acgctggtac tttgacgtgg agaggaactc ctgcaataac 120
 ttcattctatg gaggctgccg gggcaataag aacagctacc gctctgagga ggctgcatg 180
 ctccgctgct tccgccagta gggatcc 207
 <210> 45
 <211> 248
 <212> PRT
 <213> Homo sapien
 <220>
 <221> Region
 <222> 1..18
 <223> /label= signal peptide
 <400> 45
 Met Leu Arg Ala Glu Ala Asp Gly Val Ser Arg Leu Leu Gly Ser Leu
 1 5 10 15
 Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp
 20 25 30
 Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro
 35 40 45
 Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr
 50 55 60
 Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys
 65 70 75 80
 Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala
 85 90 95

Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg
 100 105 110
 Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr
 115 120 125
 Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg
 130 135 140
 Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly
 145 150 155 160
 Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met
 165 170 175
 Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser
 180 185 190
 Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe
 195 200 205
 Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln
 210 215 220
 Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln
 225 230 235 240
 Leu Val Lys Asn Thr Tyr Val Leu
 245

<210> 46
 <211> 213
 <212> PRT
 <213> Homo sapien

<400> 46
 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
 1 5 10 15
 Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
 20 25 30
 Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
 35 40 45
 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55 60
 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80
 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95
 Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
 100 105 110
 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
 130 135 140
 Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
 145 150 155 160
 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
 165 170 175
 Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr
 180 185 190
 Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val
 195 200 205
 Trp Ser Phe Gly Asp
 210

<210> 47
 <211> 240
 <212> PRT
 <213> Homo sapien

<220>
 <221> Region
 <222> 1..18
 <223> /label= signal peptide

<400> 47
 Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
 1 5 10 15
 Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
 20 25 30
 Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
 35 40 45
 Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
 50 55 60
 Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
 65 70 75 80
 Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
 85 90 95
 Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
 100 105 110
 Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
 115 120 125
 Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
 130 135 140
 Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
 145 150 155 160
 Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu

	165		170		175
Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu	180	185	190		
Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val	195	200	205		
Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala	210	215	220		
Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp	225	230	235	240	
<210> 48					
<211> 225					
<212> PRT					
<213> Homo sapiens					
<400> 48					
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val	1	5	10	15	
Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr	20	25	30		
Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser	35	40	45		
Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val	50	55	60		
Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp	65	70	75	80	
Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser	85	90	95		
Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr	100	105	110		
Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg	115	120	125		
Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn	130	135	140		
Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln	145	150	155	160	
Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly	165	170	175		
Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr	180	185	190		
Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val	195	200	205		
Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val					

210 215 220
 Leu
 225

 <210> 49
 <211> 252
 <212> PRT
 <213> Homo sapien

 <220>
 <221> Region
 <222> 1..18
 <223> /label= signal peptide

 <400> 49
 Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
 1 5 10 15

 Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
 20 25 30

 Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
 35 40 45

 Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
 50 55 60

 Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
 65 70 75 80

 Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
 85 90 95

 Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
 100 105 110

 Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
 115 120 125

 Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
 130 135 140

 Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
 145 150 155 160

 Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
 165 170 175

 Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
 180 185 190

 Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val
 195 200 205

 Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
 210 215 220

 Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp
 225 230 235 240

Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val Leu
245 250

<210> 50
<211> 146
<212> PRT
<213> Homo sapien

<220>
<223> /note= "Human Bikunin protein fragment"

<400> 50
Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg
1 5 10 15
Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly
20 25 30
Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu
35 40 45
Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr
50 55 60
Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln
65 70 75 80
Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys
85 90 95
Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp
100 105 110
Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly
115 120 125
Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu
130 135 140
Arg Cys
145

<210> 51
<211> 170
<212> PRT
<213> Homo sapien

<220>
<223> /note= "Human Bikunin protein fragment"

<400> 51
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15
Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30
Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55 60
 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80
 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95
 Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
 100 105 110
 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
 115 120 125
 Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
 130 135 140
 Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
 145 150 155 160
 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys
 165 170

<210> 52
 <211> 170
 <212> PRT
 <213> Homo sapien

<220>
 <223> /note= "Human Bikunin protein fragment"

<400> 52
 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
 1 5 10 15
 Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
 20 25 30
 Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
 35 40 45
 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55 60
 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80
 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95
 Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
 100 105 110
 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
 115 120 125
 Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys
 165 170

<210> 53
 <211> 27
 <212> PRT
 <213> Homo sapien

<220>
 <223> /note= "Signal peptide of Human Bikunin protein"

<400> 53
 Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
 1 5 10 15

Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala
 20 25

<210> 54
 <211> 23
 <212> DNA
 <213> Homo sapien

<220>
 <223> Human Bikunin protein fragment

<400> 54
 Met Leu Arg Ala Glu Ala Asp Gly Asn Ser Arg Leu Leu Gly Ser Leu
 1 5 10 15

Leu Leu Ser Gly Val Leu Ala
 20

<210> 55
 <211> 102
 <212> DNA
 <213> Artificial sequence

<220>
 <223> /note= "Oligomer for preparing expression construct"

<400> 55
 gaaggggtaa gcttggataa aagagaagaa tactgtactg ctaatgctgt tactggtcca 60
 tgtagagctt cttttccaag atggtacttt gatgttgaaa ga 102

<210> 56
 <211> 129
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Oligomer for preparing expression construct

<400> 56
 actggatcct cattggcgaa aacatctcaa catacaggct tcttcagatc tgtaagaatt 60

tttattacct ctacaaccac cgtaaataaa attattacaa gaatttcttt caacatcaaa 120
 gtaccatct 129
 <210> 57
 <211> 108
 <212> DNA
 <213> Artificial sequence
 <220>
 <223> /note= "Oligomer for preparing expression construct"
 <400> 57
 gaaggggtaa gcttggataa aagaaattac gaagaatact gtactgctaa tgctgttact 60
 ggtccatgta gagcttcttt tccaagatgg tactttgatg ttgaaaga 108
 <210> 58
 <211> 117
 <212> DNA
 <213> Artificial sequence
 <220>
 <223> /note= "Oligomer for preparing expression construct"
 <400> 58
 gaaggggtaa gcttggataa aagagatatg ttttaattacg aagaatactg tactgctaata 60
 gctgttactg gtccatgtag agcttctttt ccaagatggg actttgatgt tgaaaga 117
 <210> 59
 <211> 20
 <212> DNA
 <213> Homo sapiens
 <400> 59
 cacctgatcg cgaagacccc 20
 <210> 60
 <211> 23
 <212> DNA
 <213> Homo sapiens
 <400> 60
 ctggcggaag cagcggagca tgc 23
 <210> 61
 <211> 45
 <212> DNA
 <213> Artificial sequence
 <220>
 <223> /note= "Oligomer for preparing Bikunin expression construct"
 <400> 61
 cgcgctctcg ctgacctggc cctgcagatg gcgcacgtgt gcggg 45
 <210> 62
 <211> 60
 <212> DNA

<213> Artificial sequence

<220>

<223> /note= "Oligomer for preparing Bikunin construct"

<400> 62

ctgccccttg gctcaaagta ggaagatctt ccccccgggg gggtggttct ggcggggctg 60

<210> 63

<211> 14

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 63

Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Pro Leu Gly
1 5 10

<210> 64

<211> 20

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 64

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys
20

<210> 65

<211> 20

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 65

Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys
1 5 10 15

Arg Ala Ser Phe
20

<210> 66

<211> 10

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 66

Pro Tyr Val Asp Gly Ser Gln Phe Tyr Gly

1 5 10
 <210> 67
 <211> 55
 <212> PRT
 <213> Homo sapien

 <220>
 <223> /note= "Human Bikunin protein fragment"

 <400> 67
 Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
 1 5 10 15

 Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
 20 25 30

 Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
 35 40 45

 Val Lys Asn Thr Tyr Val Leu
 50 55

 <210> 68
 <211> 43
 <212> PRT
 <213> Homo sapien

 <220>
 <223> /note= "Human Bikunin protein fragment"

 <400> 68
 Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
 1 5 10 15

 Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
 20 25 30

 Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp
 35 40

 <210> 69
 <211> 55
 <212> PRT
 <213> Homo sapien

 <220>
 <223> /note= "Human Bikunin protein fragment"

 <400> 69
 Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
 1 5 10 15

 Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
 20 25 30

 Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
 35 40 45

 Val Lys Asn Thr Tyr Val Leu

50 55

<210> 70
 <211> 213
 <212> PRT
 <213> Homo sapien

<220>
 <223> /note= "Human Bikunin protein fragment"

<400> 70
 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
 1 5 10 15
 Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
 20 25 30
 Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
 35 40 45
 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55 60
 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80
 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95
 Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
 100 105 110
 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
 115 120 125
 Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
 130 135 140
 Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
 145 150 155 160
 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
 165 170 175
 Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr
 180 185 190
 Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val
 195 200 205
 Trp Ser Phe Gly Asp
 210

<210> 71
 <211> 225
 <212> PRT
 <213> Homo sapien

<220>
 <223> /note= "Human Bikunin protein fragment"

<400> 71

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr
180 185 190

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val
195 200 205

Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val
210 215 220

Leu
225